

ABSTRACT - NDA/NDE

TRU Waste Assay Using Active And Passive Computed Tomography[†]

Daniel J. Decman, Harry E. Martz, G. Patrick Roberson, and Erik Johansson

Lawrence Livermore National Laboratory

P.O. Box 808, Mail Stop L-231

Livermore, CA 94551, USA

Tel. (510) 422-0450 FAX (510) 422-3160

We have developed an active and passive computed tomography (A&PCT) scanner for assaying radioactive waste drums. The combination tomographic characterization of the attenuating matrix with the localization of emission sources can yield more accurate results than standard segmented gamma scanning. In this paper we will describe our experience in applying this technology to the assay of transuranic waste drums and mock waste drums with known sources. We will discuss the importance of statistical limitations, background measurements and self attenuation effects in determining the uncertainty of these assays. Also we will suggest several ways of improving the throughput of this technology for waste characterization.

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